## I. AMENDMENTS

AMENDMENTS TO THE CLAIMS

Please amend claims 1, 3, 4, and 12, as shown below.

1. (**Currently amended**) An antimicrobial composition, the composition comprising a divalent cation and a peptide, the peptide being non-glycosylated, less than about 100 amino acids, and comprising an amino acid sequence selected from the group consisting of:

~~Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu, (SEQ ID NO:1)~~

~~Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu, (SEQ ID NO:2)~~

Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu (SEQ ID NO:1); and

Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu (SEQ ID NO:2),

and conservative substitutions therein.

2. (Original) An antimicrobial composition according to claim 1 wherein the peptide is less than about 70 amino acids.

3. (**Currently amended**) An antimicrobial composition according to claim 1 ~~any one of claims 1 or 2~~ wherein the peptide comprises an amino acid sequence selected from the group consisting of:

~~Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu, (SEQ ID NO:1) and~~

~~Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu. (SEQ ID NO:2).~~

Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu (SEQ ID NO:1); and

Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu (SEQ ID NO:2).

4. (**Currently amended**) An antimicrobial composition according to claim 1 ~~any one of claims 1 or 2~~ wherein the peptide comprises an amino acid sequence selected from the group consisting of:

Met Ala Ile Pro Pro Lys Lys Asn Gln Asp Lys Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser Gly Glu Pro Thr Ser Thr Pro Thr Ile Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO:3);

Met Ala Ile Pro Pro Lys Lys Asn Gln Asp Lys Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser(*P*) Gly Glu Pro Thr Ser Thr Pro Thr Ile Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO:4);

Met Ala Ile Pro Pro Lys Lys Asn Gln Asp Lys Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser Gly Glu Pro Thr Ser Thr Pro Thr Thr Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO. 5);

Met Ala Ile Pro Pro Lys Lys Asn Gln Asp Lys Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser(*P*) Gly Glu Pro Thr Ser Thr Pro Thr Thr Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO. 6);

Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser Gly Glu Pro Thr Ser Thr Pro Thr Ile Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO. 7);

Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser(*P*) Gly Glu Pro Thr Ser Thr Pro Thr Ile Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO. 8);

Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser Gly Glu Pro Thr Ser Thr Pro Thr Thr Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO. 9);

Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser(*P*) Gly Glu Pro Thr Ser Thr Pro Thr Thr Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO. 10).

~~Met Ala Ile Pro Pro Lys Lys Asn Gln Asp Lys Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser Gly Glu Pro Thr Ser Thr Pro Thr Ile Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO:3);~~

~~Met Ala Ile Pro Pro Lys Lys Asn Gln Asp Lys Thr Ile Glu Ile Pro Thr Ile Ile Asn Thr Ile Ile Ala Ser(*P*) Gly Glu Pro Thr Ile Ser Thr Pro Thr Ile Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO:4);~~

~~Met Ala Ile Pro Pro Lys Lys Asn Gln Asp Lys Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser Gly Glu Pro Thr Ser Thr Pro Thr Thr Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO:5);~~

~~Met Ala Ile Pro Pro Lys Lys Asn Gln Asp Lys Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser(*P*) Gly Glu Pro Thr Ser Thr Pro Thr Thr Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO:6);~~

~~Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser Gly Glu Pro Thr Ser Thr Pro Thr Ile Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO:7);~~

~~Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser(*P*) Gly Glu Pro Thr Ser Thr Pro Thr Ile Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO:8);~~

~~Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser Gly Glu Pro Thr Ser Thr Pro Thr Thr Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO:9);~~

~~Thr Glu Ile Pro Thr Ile Asn Thr Ile Ala Ser(*P*) Gly Glu Pro Thr Ser Thr Pro Thr Thr Glu Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu Ile Asn Thr Val Gln Val Thr Ser Thr Ala Val (SEQ ID NO:10);~~

and conservative substitutions thereof.

5. (Previously presented) An antimicrobial composition according to claim 4 wherein the divalent cation is selected from the group comprising $Zn^{2+}$, $Ca^{2+}$, $Cu^{2+}$, $Ni^{2+}$, $Co^{2+}$, $Fe^{2+}$, $Sn^{2+}$, $Mn^{2+}$, $SnF^{+}$, and $CuF^{+}$.

6. (Previously presented) An antimicrobial composition according to claim 4 wherein the divalent cation is $Ca^{2+}$ or $Zn^{2+}$.

7. (Previously presented) An antimicrobial composition according to claim 6 wherein the

composition has a molar ratio of the divalent cation to the peptide in the range of 0.5-15.0:1.0.

8. (Original) An antimicrobial composition according to claim 7 wherein the molar ratio of the divalent cation to the peptide is in the range of 0.5:1.0 to 4.0:1.0.

9. (Original) An antimicrobial composition according to claim 8 wherein the molar ratio of the divalent cation to the peptide is in the range of 1.0:1.0 to 4.0:1.0.

10. (Original) An antimicrobial composition according to claim 9 wherein the molar ratio of the divalent cation to the peptide is in the range of 1.0:1.0 to 2.0:1.0.

11. (Previously presented) A pharmaceutical composition comprising a composition according to claim 10 and a pharmaceutically acceptable carrier.

12. (**Currently amended**) A method of treatment, comprising:

administering to a subject a therapeutically effective amount of a formulation comprising ~~comprisred of~~ a carrier and composition comprising a divalent cation and a peptide, the peptide being non-glycosylated, less than about 100 amino acids, and comprising an amino acid sequence selected from the group consisting of:

~~Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu, (SEQ ID NO:1)~~

~~Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu, (SEQ ID NO:2)~~

Ala Val Glu Ser Thr Val Ala Thr Leu Glu Ala Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu (SEQ ID NO:1); and

Ala Val Glu Ser Thr Val Ala Thr Leu Glu Asp Ser(*P*) Pro Glu Val Ile Glu Ser Pro Pro Glu (SEQ ID NO:2),

and conservative substitutions therein [[.]] ; and

allowing the formulation to act on the subject in a manner which prevents a disease selected from the group consisting of dental caries and periodontal disease.

13. (Previously presented) The method of claim 12, wherein the administering is directly to the teeth

or gums of the subject.

14. (Previously presented) A method of claim 12, wherein the administering is by topical administration.

15. (Canceled)

16. (Previously presented) An antimicrobial composition according to claim 2 wherein the divalent cation is selected from the group comprising $Zn^{2+}$, $Ca^{2+}$, $Cu^{2+}$, $Ni^{2+}$, $Co^{2+}$, $Fe^{2+}$, $Sn^{2+}$, $Mn^{2+}$, $SnF^{+}$, and $CuF^{+}$.

17. (Previously presented) An antimicrobial composition according to claim 2 wherein the divalent cation is $Ca^{2+}$ or $Zn^{2+}$.

18. (Previously presented) An antimicrobial composition according to claim 1 wherein the divalent cation is selected from the group comprising $Zn^{2+}$, $Ca^{2+}$, $Cu^{2+}$, $Ni^{2+}$, $Co^{2+}$, $Fe^{2+}$, $Sn^{2+}$, $Mn^{2+}$, $SnF^{+}$, and $CuF^{+}$.

19. (Previously presented) An antimicrobial composition according to claim 1 wherein the divalent cation is $Ca^{2+}$ or $Zn^{2+}$.